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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,100	07/29/2003	Mark Dimitrijevic	HO-P02803US0	6359
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				SPAHN, GAY
			ART UNIT	PAPER NUMBER
				3673

DATE MAILED: 06/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/629,100	DIMITRIJEVIC, MARK
	Examiner	Art Unit
	Gay Ann Spahn	3673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 13 April 2006.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-4 and 6-21 is/are pending in the application.
 4a) Of the above claim(s) 10-17 is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-9 and 18-21 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4, 6-9, and 18-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(1) **Claim 1**, lines 7-8, the recitation of “said sidewalls having a ridge extending generally about said sidewalls and integral to said sidewalls” is vague, indefinite, and confusing because Applicant is reciting that the at least two sidewalls together have a single ridge which extends generally about said at least two sidewalls and is integral to said at least two sidewalls. If the sidewalls constitute the semi-circular outer periphery of each of the semi-circles (113a, 113b) shown in Fig. 3 and the ridge constitutes the outer edge (109) shown in Fig. 1B of the offset surface (109b) shown in Fig. 2, then the ridge (109) is only integral to one of the at least two sidewalls.

(2) **Claim 4**, line 3, the recitation of “offset surfaces” is vague, indefinite, and confusing as lacking antecedent basis since it is not clear if one of the “offset surfaces” is the same “offset surface” recited in claim 1, lines 9-10 and lines 10-11, respectively, or is a different offset surface. If one of the “offset surfaces” is the same “offset surface” as recited in claim 1, then the examiner suggests amending “offset surfaces” of claim 4 to --said offset surface and a second offset surface-- or similar.

(3) **Claim 4**, lines 3-4, the section halves are recited to be “mutually facing one another to create offset surfaces that form said first and second ridges”. This is vague, indefinite, and confusing because the claim should recite that the section halves mutually face each other *in an offsetting manner* to create said offset surface and a second offset surface that form said first and second ridges, respectively. The examiner notes that if the section halves (i.e., semi-circles 113a, 113b shown in Fig. 3) did not face each other in an offsetting manner, the two halves would form a circle, not the offsetting semi-circle configuration shown in Figs. 2 and 3 and the notches (109a) would not be present.

(4) **Claim 7**, line 2, the recitation that “said body includes two spiral ridges” is vague, indefinite, and confusing as lacking antecedent basis because it is not clear if the two spiral ridges are in addition to the “ridge” recited in claim 1, lines 7 and 9-10.

(5) **Claim 8**, line 2, the recitation that “said body includes two spiral ridges each with offset surfaces” is vague, indefinite, and confusing as lacking antecedent basis because it is not clear if the two spiral ridges are in addition to the “ridge” recited in claim 1, lines 7 and 9-10. Further, it is not clear if each one of the two spiral ridges has a single offset surface or a plurality of offset surfaces and it is not clear if the offset surfaces are in addition to the offset surface already recited in claim 1, lines 10-11.

(6) **Claim 18**, lines 7-8, the recitation of “said sidewalls having two spiral ridges extending generally about said sidewalls and integral to said sidewalls” is vague, indefinite, and confusing because it is not understood if Applicant is reciting that each sidewall of the at least two sidewalls have two spiral ridges or that both of the at least

two sidewalls together have two spiral ridges. If the sidewalls constitute the semi-circular outer periphery of each of the semi-circles (113a, 113b) shown in Fig. 3 and the ridge constitutes the outer edge (109) shown in Fig. 1B of the offset surface (109b) shown in Fig. 2, then the ridge (109) is only integral to one of the at least two sidewalls.

(7) **Claim 19**, lines 2-4, the section halves are recited to be "mutually facing one another to create said offset surfaces that form said first and second ridges". This is vague, indefinite, and confusing because the claim should recite that the section halves mutually face each other *in an offsetting manner* to create said offset surface and a second offset surface that form said first and second ridges, respectively. The examiner notes that if the section halves (i.e., semi-circles 113a, 113b shown in Fig. 3) did not face each other in an offsetting manner, the two halves would form a circle, not the offsetting semi-circle configuration shown in Figs. 2 and 3 and the notches (109a) would not be present.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1, 2, 6, and 9 are rejected under 35 U.S.C. 102(a) as being anticipated by XU et al. (U.S. Patent Application Publication No. 2002/0168232).

As to claim 1 (and as best understood despite the 35 U.S.C. § 112, second paragraph, indefiniteness discussed above), XU et al. discloses a foundation pile (see Fig. 15) which is capable of functioning as a foundation pile and which can provide support to an above-ground structure, said foundation pile comprising;

a generally solid body (segment shown in Fig. 15 from 190 of Fig. 14) having,

a top end wall (end wall shown in Fig. 15),

a bottom end wall (end wall opposite end wall shown in Fig. 15) adapted for providing load bearing capacity, and

sidewalls (sidewall of left half of cylindrical segment of Fig. 15, sidewall of right half of cylindrical segment of Fig. 15) extending between said top end wall and said bottom end wall, said sidewalls having a ridge (of width "B") extending generally about said sidewalls and integral to said sidewalls, wherein said ridge has an offset surface extending generally outward from a surface of said sidewalls, said offset surface providing additional load bearing capacity.

As to claim 2 (and as best understood despite the 35 U.S.C. § 112, second paragraph, indefiniteness discussed above), XU et al. disclose the foundation pile of claim 1 as discussed above, and XU et al. also disclose that said ridge is a spiral ridge extending in a generally downward spiral direction about said sidewalls (see Fig. 15).

As to claim 6 (and as best understood despite the 35 U.S.C. § 112, second paragraph, indefiniteness discussed above), XU et al. disclose the foundation pile of claim 1 as discussed above, and XU et al. also disclose that said ridge extends spirally

substantially the entire distance between said top end wall to said bottom end wall (see Fig. 15).

As to claim 9 (and as best understood despite the 35 U.S.C. § 112, second paragraph, indefiniteness discussed above), XU et al. disclose the foundation pile of claim 1 as discussed above, and XU et al. also disclose that said body has generally cylindrical shape (see Fig. 15).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over XU et al. (U.S. Patent Application Publication No. 2002/0168232).

As to claim 3 (and as best understood despite the 35 U.S.C. § 112, second paragraph, indefiniteness discussed above), XU et al. disclose the foundation pile of claim 1 as discussed above.

XU et al. fail to explicitly disclose that said sidewalls include a second ridge extending generally about said sidewalls.

However, it is well settled that duplication of parts is not a patentable difference. See *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960) (Claims at issue were directed to a water-tight masonry structure wherein a water seal of flexible material fills

the joints which form between adjacent pours of concrete. The claimed water seal has a "web" which lies ** in the joint, and a plurality of "ribs" ** >projecting outwardly from each side of the web into one of the adjacent concrete slabs. <The prior art disclosed a flexible water stop for preventing passage of water between masses of concrete in the shape of a plus sign (+). Although the reference did not disclose a plurality of ribs, the court held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced.).

It would have been an obvious expedient to one of ordinary skill in the art at the time the invention was made to modify the foundation pile of XU et al. to have two ridges to enhance the VIV reduction effect and particularly since it has been well established that mere duplication of parts is not a patentable difference.

As to claim 7 (and as best understood despite the 35 U.S.C. § 112, second paragraph, indefiniteness discussed above), XU et al. discloses the foundation pile of claim 1 as discussed above.

The embodiment of XU et al. shown in Fig. 15 fail to explicitly disclose that said body includes two spiral ridges, each said ridge traversing horizontally about said sidewalls an arc distance of about 90°.

However, the top three segments of 190 shown in Fig. 14 teach a spiral ridge traversing horizontally about said sidewalls an arc of about 90°.

It is well settled that duplication of parts is not a patentable difference. See *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960) (Claims at issue were directed to a water-tight masonry structure wherein a water seal of flexible material fills the joints

which form between adjacent pours of concrete. The claimed water seal has a "web" which lies ** in the joint, and a plurality of "ribs" ** >projecting outwardly from each side of the web into one of the adjacent concrete slabs. <The prior art disclosed a flexible water stop for preventing passage of water between masses of concrete in the shape of a plus sign (+). Although the reference did not disclose a plurality of ribs, the court held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced.).

Further, the Fig. 5 embodiment of XU et al. teach the desirability of providing a pair of opposed ridges (132d, 132d) which are displaced 180° apart.

Therefore, it would have been an obvious expedient to one of ordinary skill in the art at the time the invention was made to modify the foundation pile of XU et al. to have two spiral ridges which are displaced about 180° apart and which traverse an arc of about 90° to enhance the VIV reduction effect and particularly since it has been well established that mere duplication of parts is not a patentable difference.

As to claim 8 (and as best understood despite the 35 U.S.C. § 112, second paragraph, indefiniteness discussed above), XU et al. disclose the foundation pile of claim 1 as discussed above.

XU et al. fail to explicitly disclose that said body includes two spiral ridges, each with offset surfaces, said offset surfaces providing a load bearing surface that is between about .35 to .55 times the load bearing surface of said bottom end wall.

It is well settled that duplication of parts is not a patentable difference. See *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960) (Claims at issue were directed to a

water-tight masonry structure wherein a water seal of flexible material fills the joints which form between adjacent pours of concrete. The claimed water seal has a "web" which lies ** in the joint, and a plurality of "ribs" ** >projecting outwardly from each side of the web into one of the adjacent concrete slabs. <The prior art disclosed a flexible water stop for preventing passage of water between masses of concrete in the shape of a plus sign (+). Although the reference did not disclose a plurality of ribs, the court held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced.).

It would have been an obvious expedient to one of ordinary skill in the art at the time the invention was made to modify the foundation pile of XU et al. to have two spiral ridges with offset surfaces to enhance the VIV reduction effect and particularly since it has been well established that mere duplication of parts is not a patentable difference. Establishing an offset surface that is between about .35 to .55 times the surface of the bottom end wall, thus providing an appropriate VIV reduction effect as may be deemed appropriate, would have constituted an obvious expedient to one of ordinary skill in the art at the time the invention was made.

Allowable Subject Matter

Claim 18 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Claims 4, 5, and 19-21 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments filed 13 April 2006 have been fully considered but they are not persuasive.

Applicant alleges that the notches of XU et al. are not designed to support any portion of the compressive load on the column and the notches are designed only to effect current moving generally laterally to the column. As evidence of this, Applicant points to Paragraph No. [0047] of XU et al. by stating that “[t]he non-load bearing character of the notches is evident in that the vortex shedding shapes can be made from polymeric foam. The examiner notes that Paragraph No. [0047] discusses the embodiment of Fig. 3 which has not been applied in the rejection of the claims and that what is said to be made of polymeric foam are the additional buoyancy segments 80a, 80b, 80c, and etc., not the VIV reduction mechanism 56 and thus, Paragraph No. [0047] does nothing to support Applicant's allegation that the spiral ridges shown in the Fig. 14-18 embodiment are non-load bearing.

Applicant also alleges that because the notches of XU et al. are formed in the cylindrical outer wall rather than extending outwardly from the outer periphery, the notches actually reduce the compressive load-bearing surface. The examiner disagrees and notes that the offset surfaces shown in Fig. 14 would add at least some

load bearing capacity however small. Indeed, the piling of the instant application has "a notch formed in the outer wall". The so-called notch, (offset surface), of XU et al. serves to form a ridge and offset surface as is recited in the instant claims.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gay Ann Spahn whose telephone number is (571)-272-7731. The examiner can normally be reached on Monday through Thursday, 8:30 am to 7:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia L. Engle can be reached on (571)-272-6660. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GAS
Gay Ann Spahn, Patent Examiner
June 17, 2006


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6-21-06